

Great Expectations:

Creative Achievements of the Sociometric Stars in a 30-Year Study

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The creative achievements and characteristics of a group of ten high school students identified as the most creative by their high school peers were compared to those of ten participants from the same group who had the greatest number of publicly recognized creative achievements approximately 30 years later (Sociometric Stars vs. Beyonders). Mini-case studies were presented for the 10 Sociometric Stars and hypotheses were advanced to explain their failure to qualify for the Beyonders. Results of the comparisons indicate that life situations such as divorce and caring for children, in addition to personal factors such as love of work, sense of purpose in life, and high energy, were more important in affecting creative achievements than the usual predictors of creativity: intelligence, academic achievement, and sociometric nominations.

Introduction to Great Expectations

by Bonnie Cramond, Editor

The following is a report that was never published from the longitudinal studies conducted by E. Paul Torrance. His studies, which were begun in 1958 at elementary and high schools in Minneapolis, were designed to investigate the ability of several measures gathered from the participants to predict their adult creative achievements years later. There were several data collection points: a 7-year follow-up of the high school students, a 12-year follow-up of the same students, a 22-year follow-up of the students who had been in elementary school, and a 40-year follow-up of the elementary students. The results of these data collection points have been published elsewhere, all but the results of the 30-year follow-up. These data were collected by a graduate student to use in his dissertation, but he somehow lost them, and the results were never published.

I found this study in Torrance's archives recently when going through his papers and considered it too important to leave unpublished. I revised and edited the paper somewhat to bring it in line with current APA guidelines, reorganized some of the tables for

greater clarity, and changed some of the wording for consistency. For example, in the original paper, Torrance used the terms "Sociometric Stars" and "Great Expectations" interchangeably to refer to the same group of individuals who received the highest number of sociometric votes from their peers as most creative. I changed all references to the group to the name "Sociometric Stars" to avoid confusion. Otherwise, the article remains as Torrance wrote it, and those who have read his work should recognize his voice in it.

How important are the expectations of peers in the future creative achievements of adolescents? Are one's classmates in a position to judge or predict his or her future creative behavior?

The primary objective of this article is to analyze the data concerning the 10 Sociometric Stars, students chosen by their classmates in high school to be outstanding creative individuals, and to see how they are different from the Beyonders, individuals from the same longitudinal study group identified in adulthood because their creative achievements were so much higher than the others.

Background

Several investigators of creative achievement (Amabile, 1986; Shekerjian, 1990; Torrance, 1981, 1987) have concluded that extraordinary talent, personality, and cognitive ability do not seem to be enough—it's the "labor of love" aspect that determines creativity. Two of these investigators (Shekerjian, 1990; Torrance, 1983) have suggested more elaborate lists. A passionate love of what one is doing may be at the root of the other characteristics, but Shekerjian and Torrance's lists offer additional clues.

Shekerjian (1990) studied 40 of the prestigious MacArthur Fellows through interviews, records of their creative productions, and nomination data. The MacArthur Awards "enabled the recipients to enjoy the ease of financial strain, the gift of time, and the star-making machinery that goes along with it all" (p. xi). Based upon her findings, her recommendations for creative people are the following:

1. Find your talent.
2. Commit to it and make it shine.
3. Don't be afraid of risk. Or even failure, which if seen in its proper light, brings insight and opportunity.
4. Find courage by looking to something stronger and better than your puny, vulnerable self.
5. No lusting after quick resolutions. Relax. Stay loose.
6. Get to know yourself; understand your needs and the specific conditions you favor.
7. Respect, too, your culture.
8. Then, finally, break free from the seductive pull of book learning and research and the million other preparatory steps that could delay for the entire span of a life and immerse yourself in the doing. (p. 75)

Quite independently, Torrance (1984), on the basis of his 22-year study of the adult creative achievement of young adults tested at the time they were pupils in elementary school, presented a similar list that became "The Manifesto for Children" (Henderson & Presbury, 1983). This seemed to summarize the advice the subjects in this study were offering all children, especially creative children:

1. Don't be afraid to fall in love with something and pursue it with intensity.
2. Know, understand, take pride in, practice, develop, exploit, and enjoy your greatest strengths.
3. Learn to free yourself from the expectations of others and to walk away from the games they impose on you. Free yourself to play your own game.
4. Find a great teacher or mentor who will help you.
5. Don't waste energy trying to be well-rounded.
6. Do what you love and can do well.
7. Learn the skills of interdependence and give freely of the infinity of your creativity.

In another source, Torrance (1991) described the concept of the Beyonders and how the Beyonders Checklist was developed. Torrance identified 10 subjects from the 30-year study who were considered to be Beyonders because their creative achievements were so much higher than the others. It was found that forces such as love and enjoyment of one's work, persistence, purpose in life, diversity of experience, high energy level, and a sense of mission dominated over creative ability, intelligence, and high school achievement in enabling creative achievement (Torrance, 1993).

The Longitudinal Studies

The primary objective of this article is to analyze the data concerning the 10 Sociometric Stars to see how they are different from the 10 Beyonders. A comparison of the publicly recognized and acknowledged creative achievements of the Beyonders and the Sociometric Stars were significantly different ($t = 6.921$, $p = .0001$), with the Beyonders much higher than the Stars. On personal creative activities there was a difference in favor of the Beyonders, too, but the difference was not significant. However, on number of sociometric choices, the Sociometric Stars were significantly higher than the Beyonders ($t = 6.9212$, $p = .0001$).

Detailed accounts of the earlier studies are contained in other sources (Torrance, 1969, 1971, 1972). Torrance has described how measures administered during high school were used as predictors of the students' later creative achievements in adulthood. Predictors included scores from the Torrance Tests of Creative Thinking, IQ, achievement test scores, and peer nominations on a five-item sociometric test asking for classmates who demonstrated the following creative abilities: fluency (most ideas), originality (unusual ideas), flexibility (new solutions as the situation changed), inventiveness, and elaboration (details). Criterion data were obtained from the follow-up questionnaires, which called for demographic data such as education, honors, jobs held, foreign work or study, future images, and creative achievements (quantity and quality). Correlation coefficients between the creativity measures administered in high school and the creative accomplishments reported in adulthood ranged from .46 to .58 ($p < .01$; Torrance, 1972, p. 243). The predictive ability of the scores on the intelligence tests, achievement tests, and sociometric scale were not significant at this level.

Although these coefficients are considered to be moderate (Cohen, 1988), they are much larger than one would expect given the length of time between the administration of the predictor variables and the criterion measures, as well as the complex nature of the construct being measured (creativity).

Table 1

Creative Achievements By Data Collection Point Correlated with Predictors

Creative Achievements	Creativity Index	Sociometric Total	Iowa Achievement Test	Lorge-Thorndike IQ
1st Follow-up, 7 years later	.15*	.13	.30*	.22*
2nd Follow-up, 12 years later	.59*	.39*	.47*	.46*
3rd Follow-up, 32 years later	.25*	.13	.21*	.29*

Note. *Significant at the .05 level.

However, these numerical data do not tell the whole story. The numbers represent measures of individual abilities, choices, and ratings, but the most compelling characteristics of the Sociometric Stars are those that have facilitated the use of their creativity, intelligence, and environment. Some of the statistical results will be briefly presented, but the emphasis will center on the case data.

Statistical Results

The original testing was done in September 1959, and the sociometric data were collected in May 1960. The first follow-up data were collected from the seniors in May 1966 ($n = 46$ of 69). The second follow-up was conducted in 1971, and questionnaires were sent to all of the participants ($n = 251$ of 392). In the 1991 follow-up, data were obtained from 81 subjects. The correlation coefficients for the creativity measures, sociometric index, achievement test data, and Lorge-Thorndike IQ with the creative achievement data are reported in Table 1.

The results for the third follow-up are incomplete. A graduate student collected the third follow-up data with the intention of reporting them in his doctoral dissertation. However, the data were lost.

Torrance believed that the trends reported here would hold up in future studies, although there were several intervening variables that might explain the differences. By the time of the third follow-up study, many of the subjects had been lost, and they tended to be those who scored lowest in creative abilities and creative achievement, thus reducing the variability of the scores and the correlations.

It has already been shown that the Beyonders group and Sociometric Stars group differed in the expected ways: The Beyonders had more publicly recognized creative achievements than the Sociometric Stars (means 180.3 to 57.3), but they did not differ on personal creative achievements (means 15.3 to 13.5). The Sociometric Stars, of course, beat the Beyonders in number of sociometric nominations (means 60.7 to 17.4). All of these differences are significant at less than the .0001 level.

Table 2

Comparisons Between the Beyonders and Sociometric Stars

	Beyonders	Sociometric Stars	<i>p</i>
Iowa Achievement	90.2	97.0	.0005
Number of children	1.5	2.3	.3130
Number having Ph.D., MD	6	5	.6530
Number receiving grants	7	5	.2500
Sees self as creative	7	4	.1780

There were 4 men and 6 women in the Sociometric Stars and 2 women and 7 men in the Beyonders group.

There were also other variables on which these two groups can be quantified and compared. For example, on the Lorge-Thorndike Intelligence Test, the mean for the Beyonders was 128.6 and 133.2 for the Sociometric Stars, but the difference was not significant at the .10 level. Other variables are as indicated in Table 2. From these data, it can be seen that the two groups are statistically different only on the Iowa Achievement Test with the Sociometric Stars group having the advantage.

Table 3 shows the data for all of the Sociometric Stars that was collected in 1959–1960. The names given the participants are fictitious. For the purpose of comparison, for the whole group of participants, the mean IQ on the Lorge-Thorndike Intelligence Test was 125 and the mean percentile rank on the Iowa Test of Achievement was 88. The mean number of sociometric nominations was 21.5, and the mean creativity test score was 245.

Case Studies

Mini-case studies will now be presented of the Sociometric Stars group using the information furnished by the participants covering the 20-year period from 1971 to 1991.

Table 3

Scores for the Sociometric Stars on the Predictor Variables

Identifier	Creativity Index	Sociometric Nominations	Iowa Achievement Test Percentile	Loge-Thorndike IQ
Group Mean	245	21.5	88	125
Joe Raymond	210	99	94	125
Jeane North	317	52	99	144
Alice Driscol	175	59	99	127
Roberta Kohl	256	95	97	127
Daniel Barclay	226	49	99	139
Natalie Moore	284	76	90	158
Mary Barclay	312	46	94	140
Dorothy Young	224	80	99	137
Kate Post	242	47	99	135
Irving Brock	300	47	93	108
Charles Stowe	356	72	99	143

Joe Raymond

Joe Raymond was the only participant who qualified for both the Beyonders and the Sociometric Stars groups. However, he was excluded from both groups and replaced for the comparison analyses. He had had careers both in insurance and as a blues player, singer, and composer. He completed 3 years of college.

Joe began his career as a blues player and singer in 1958 while he was in high school and still performs professionally. He composed 30 songs during the time covered by this study and has won a number of music awards. He sold his recording studio in 1978. At this time, he had to deal with alcoholism and drugs and worked as a carpenter for about 3 years, after which he studied insurance at the University of Minnesota and the American College. At the present time, he is still in the insurance field, where he writes articles for professional journals and has conducted seminars and in-service training, won awards for leadership, and automated his insurance agency. His enthusiasm for music performance and composition continues. At the time of the follow-up, he was recording a blues composition that he thought would do well because his musical work was known even while he was in high school.

He had creative achievements in two fields and took leadership roles in both of them. He was, however, slowed down at times by his divorce and alcoholism.

Jeane North

Jeane North was a high school senior at the time the study was initiated. She studied at the University of Minnesota and

Harvard University and earned a doctorate in anthropology. She progressed rapidly through the academic route to full professor at the State University/College of New York at Buffalo. At the time of the follow-up, she was divorced and had one child.

From these data it would be predicted that Jeane would qualify for both groups. She had had a successful career, but we do not have evidence of the enthusiasm and passion that is found in the Beyonders. Her achievements reflect a more traditional and conforming career. We would say she has had an excellent career as an anthropologist, but she has not been another Margaret Mead.

She listed the following creative achievements:

- One published book.
- Published articles regularly in professional journals.
- Three research grants.
- Presented original papers at professional meetings.

She considered the original papers as her most creative achievement. She was aware of her creative powers, and commented:

For me, being alive means I must be creative. There is so much I know and have experienced by now and so few clues from the past as to what the future holds that I could not endure being alive if I were not a creative person.

Alice Driscol

At the time of the 30-year follow-up, Alice Driscol held a Ph.D. from Harvard University and was an associate professor of history at Notre Dame University. She was married and had

three children. She had held three fellowships during her graduate school career, and she scored 37 for publicly recognized creative achievements and 13 for personal creative accomplishments.

Alice reported the following creative achievements during the time covered by this study:

- Two published feature stories.
- Two published articles in professional journals.
- Received one research grant.
- Conducted one seminar.
- Helped found a business or professional organization.
- Regularly created original educational materials.

She reported that her spouse was a lawyer, and she gave him credit for influencing her creative development, along with her professional colleagues. She did not consider herself as particularly creative. She tried to create the conditions for teaching and writing. She said that, over time, she had developed a deepened understanding of creative impulses and systematic discipline in producing work.

Roberta Kohl

Roberta Kohl was a sophomore at the time of the original testing. At the time of the follow-up, her spouse was in personnel work. She had three children and gave her occupation as “housewife/mother/volunteer/member of the board of directors of family agribusiness.” She held a bachelor’s degree from a liberal arts college. She attained a score of 30 on publicly recognized creative achievements and 23 for personal creative activities. She evaluated her three most creative accomplishments as follows:

1. Raising children—finding activities that reinforce their interest and abilities. Oldest liked computers, middle one was very interested in art, and the youngest was a dabbler in science.
2. Writing class letter for my college class three times a year, I take information classmates send to me and compile it into one letter that then goes out to all the classmates. I have found I really love doing it. If I had my life to do over again, I’d be a writer.
3. One of the hardest things I ever did was to serve as an adult leader for a future problem solving team that went to the state competition. Finding materials for the kids and trying to stimulate them to look at things in new ways was extremely difficult.

When asked if she perceived herself as creative, she wrote:

In some ways, I am sorely lacking. I cannot visualize how something will look when it’s done. My middle son is particularly gifted at this, and it is fascinating to me to watch him work—solve a math problem, design something, whatever.

In this case, we see an individual who deliberately chose not to use her creativity in the usual ways. She was an excellent volunteer. In fact, she volunteered to serve as a mentor in the Creative Scholars’ Program sponsored by the Torrance Center for Creative Studies and the Scholastic Testing Service. This case highlights one of the biggest flaws in this study. Originally, there was no way for individuals to report creative achievements that were outside of the public arena. Devising the personal or everyday creativity checklist helped somewhat. Roberta achieved one of the highest scores on this measure.

Daniel Barclay

Daniel Barclay was a senior at the time this study was initiated. At the time of the follow-up, he was divorced, remarried, and had one child. He received his undergraduate degree from Stanford University and then attended the London School of Economics, received a law degree from the Yale Law School, and earned his Ph.D. from Stanford University. At the time of the follow-up, he was an associate professor at DePaul University. He scored 39 on publicly recognized creative achievements and 14 on personal creativity. He reported the following publicly acknowledged creative achievements:

- Published 10 articles in scientific professional journals.
- Received two research grants.
- Presented 10 original papers at professional meetings.
- Created original educational materials.

He described his three most creative accomplishments:

1. Made composite music tapes.
2. Invented educational games for his daughter
3. Prepared research questionnaire or political science research projects.

Daniel did not see himself as a creative person. However, in the earliest follow-up, he reported a rather full schedule of creative activities in pursuit of a mission. In this latest follow-up, he seemed to have lost this fire and settled into a more conforming role.

Natalie Moore

At the time the follow-up data were collected, Natalie Moore was a psychotherapist. She had been divorced and had remarried and had one daughter and one stepdaughter. Her spouse was the CEO of a public company. She was currently in a doctoral program. Her experiences in higher education were at Carleton College (bachelor’s degree), the University of California at Berkeley (master’s degree), and the Saybrook Institute in San Francisco (doctoral program). She earned a score of 75 on publicly acknowledged creative attainments and 18 on personal everyday creative achievements. Her publicly recognized creative achievements were the following:

- Conducted five professional seminars.
- Suggested changes 10 times.
- Founded a business or professional organization.
- Received two awards for leadership.

She described her three most creative feats as follows:

1. Practice of psychotherapy—To be an effective therapist, creativity is essential. Though training revolves around learning specific techniques and theories, the real work is in the practice, in the use of oneself to involve oneself with another in a helpful and influential way. This involves creative use of one's own personality.
2. Being a mother—Again, as in psychotherapy, being a good parent involves creative use of self to understand and guide a developing human being.
3. My work in my Ph.D. program—My return to school has involved both a need for stimulation professionally and a return to interests that characterized my early life: interest in ideas, literature, and so forth. As my work has evolved, it has been a creative integration of all that has passionately interested me in life and of the best parts of myself.

Natalie attached an insightful description of the conflicts that had hampered her acceptance of herself as a creative person. The following excerpt catches the essence of the conflict:

I have always felt great conflict about myself as a creative person. My self-image has included a view of myself as intelligent, but not necessarily creative. In the past several years, this conflict has been mostly alleviated largely because I now understand its origins. As a child, I was clearly creative and actively involved in projects (drama, music, organizing nursery schools for neighborhood kids, etc.). I had passionate interests that I pursued passionately. This began to dissipate as I reached adolescence. Partly, I think, this is cultural: Many women suppress their individuality as they reach the teen years. But, I also know that my "success" very directly threatened my father, and so I began to direct myself to interests and activities more like those of my mother. I redirected myself from my intellectual, creative enthusiasms to the caretaking and practical, responsible roles that were characteristic of my mother. I did well, but I never felt that I had found my niche, and I was always restless, personally and professionally.

Mary Barclay

Mary Barclay, at the time of the follow-up, was working as an assistant professor in the health field, and her spouse was a vocational rehabilitation counselor. Her first husband was deceased, and she was caring for the seven children who were fathered by him. Her father was a medical doctor, and, prior

to his death in 1965, she had avoided the medical field. About this, she wrote:

I spent years avoiding the medical interest out of a fear of competing with my father—but destiny will not be denied! I am now teaching interpreters how to work in medical settings. Were I younger, I think medical school would be a given. Maybe in my next life?

She had a bachelor's and master's degree from the University of Minnesota, and she had taken special work at the College of St. Thomas. She has a score of 74 for public creative achievement and 15 for personal creativity. Her publicly acknowledged creative achievements may be summarized as follows:

- Published a manual.
- Published an article in a professional journal.
- Regularly conducted seminars.
- Regularly suggested changes in policies.
- Presented papers at professional meetings.
- Twice received awards for leadership.
- Twice created original educational materials.

She described her most creative achievements as follows:

1. Modifying/designing health care interpreter program—structure, courses, materials.
2. Wrote an article on bilingual education for deaf children.

She was well aware of her own creativity without apologies. However, it had taken her many years to reach this stage

Dorothy Young

At the time of the 30-year follow-up, Dorothy Young was working as an attorney and public administrator. She was married to a public administrator and had two children. She had attended the University of Wisconsin, University of Minnesota, and University of Vermont Law School. She had also worked as a welfare caseworker, vocational counselor, and various positions in the legal field. At the time of the follow-up, she was regional coordinator of the agency of human services. Dorothy scored 82 on public creativity and 10 for personal creativity. Although she was not a Beyonder, she had been quite successful. Her publicly acknowledged creative achievement may be summarized as follows:

- Published one newspaper essay.
- Authored one professional manual and coauthored two others.
- Coauthored an article in a professional journal.
- Regularly conducted seminars.
- Regularly gave suggestions that were accepted.
- Three times founded a business or professional organization.

- Received two awards for leadership.
- Twice elected to public office.
- Appointed to public boards, task forces, and associations.

She rated the following as her three most creative achievements:

1. Cocounsel on a landmark action to void contracts relating to Seabrook, NH, nuclear facility.
2. Served as chair of the Governor's Commission on Women's Task Force on Domestic Violence and co-authored its report, *Abuse, Prevention, and the Criminal Justice System*.
3. Rearing two very satisfactory children, then ages 6 and 9.

About her creativity, she stated that she was not so much an original thinker as she was an unusually creative problem solver. Again, we have someone who would be rated by some as a Beyonder and was certainly having a very successful career.

Kate Post

At the time of this study, Kate Post was remarried and was working as an information center specialist. She had a master's degree from the University of Minnesota in 1977. Her husband was a nurse anesthetist. She had held six positions in the library field. She scored 77 on public creativity and 15 in personal creativity. She reported the following creative achievements:

- Two poems published.
- Regularly suggested modifications that were adopted.
- Regularly created advertising ideas.
- Followed a career in writing and graphic design.

She was well aware of her creativity, and she had many experiences of everyday creativity. She had no children.

Irving Brock

At the time of the 30-year follow-up, Irving Brock was an actor who was married to an actress in New York City. He reported that they had no children. He received his bachelor's degree from the University of Minnesota and continued in graduate school for 2 more years. He had been performing on the stage since elementary school. He worked with the Guthrie Theatre Acting Company and held the McNight Fellowship in Acting. Acting had been his sole occupation since 1975. His public creativity score was 78 and his personal creativity score was 5. His creative achievements may be summarized as follows:

- Regularly acted, worked as performer.
- Worked as playwright.
- Received an award for playwriting.
- Founded a business/professional organization.

Irving reported his three most creative achievements as follows:

1. Helping to found a theatre company. He was then currently president of the board of directors of the Chelsea State Company, formerly the Hudson Guild.
2. Helping to found an educational retraining center for actors. He was then currently president of the board of directors of the actors' work program.
3. He had played numerous roles over the years that were rewarding to him, including Will in *Progress*, Clarence in *Clarence*, and Bluntschli in *Arms and the Man*.

He was aware of his own creativity, and he regarded acting as a creative occupation. He was also aware of the problems of quantifying creativity in the current study. Because of the enthusiasm and love for what he had been doing, he probably should have been called a Beyonder.

Charles Stowe

At the time of the follow-up, Charles Stowe was divorced and had remarried, but he had no children. He had relocated to Hawaii and, since 1978, had been in an emergency medical practice. His medical practice had been at the University of Oregon's Institute for Molecular Biology and the Albert Einstein College of Medicine. He attained a score of 76 on public creativity and ?? on personal creativity. His publicly acknowledged achievements may be summarized as follows:

- Published one book.
- Published three professional/scientific articles in journals.
- Regularly conducts professional seminars.
- Regularly made suggestions about needed changes that were accepted in the work situation.
- Published a software program.

He listed the following as his most creative achievements:

1. Software program and manual.
2. Design of house.
3. Paintings made throughout the period of the third follow-up.

He was aware of his creativity and chose to use it in emergency medicine. Since some degree of creativity is required whenever an emergency is encountered, he was given credit for the practice of emergency medicine as a creative activity.

Comparison on Beyonder Characteristics

Each of the follow-up questionnaires of the Sociometric Stars and Beyonders were carefully scanned for evidence of Beyonder characteristics as identified and described by Shekerjian (1990) in her study of the MacArthur Fellows and Torrance (1991, 1993) in this study. These characteristics were scored if the subject used the word in describing his or her achievements or if it could be clearly inferred from the descrip-

Table 4

Comparison of Sociometric Stars and Beyonders on the Beyonder Characteristics

Characteristics	Number of Sociometric Stars (<i>N</i> = 10)	Number of Beyonders (<i>N</i> = 10)	Chi-square value	Exact test <i>p</i> value 2-tail
Love of work	3	10	10.769	.00030
Persistence	3	9	7.500	.02000
Purpose in life	2	10	13.333	.00007
Diversity of Experience	1	9	12.800	.00010
High energy	2	10	13.333	.00007
Creative self concept	5	7	0.833	.65000
Risk taker	2	7	5.051	.07000
Open to change	3	9	7.500	.02000

tion of the creative achievements. The data shown in Table 4 is the result of this analysis.

This table shows that the Beyonder characteristics occurred more frequently among the Beyonders than among the Sociometric Stars group. On account of the small number of subjects, exact tests, rather than chi-squares, were computed. Love of one's work, feeling of purpose in life, and high energy level had been noted in 100% of the questionnaires of the Beyonders. Also, 9 of the 10 cases in this group were scored positively for persistence, diversity of experience, and openness to change.

Hypothesized Causes of Falling Short of "Greatness"

All of the Sociometric Stars had lived successful creative lives in the 30 years since being originally tested. Only Joe Raymond was able to qualify as a Beyonder according to Torrance's criteria. We have just shown that, as a group, the Sociometric Stars did not manifest many of the characteristics of a Beyonder. Why did they not achieve this level of greatness?

First, let us take the case of Joe Raymond. His case is perhaps the most complex of all, and he has not been included in any of the group comparisons. In high school, he received the largest number of sociometric nominations, yet he was the only one who did not graduate from college. At the time of this follow-up, he was divorced, had been an alcoholic, had been forced to sell his recording studio, and had had to take time out for military service—enough to ruin almost any creative career. However, he got help with his alcoholism and became a member of Alcoholics Anonymous, went into the insurance business, took university courses in insurance, wrote original articles published in insurance journals, automated his insur-

ance business, and continued his interest in blues music. In his follow-up questionnaire, he stated that he was working on some music that would become his most creative achievement. He gave the following clue to a very complicated creative career:

Although it's very satisfying to be sober, I think that I had a greater creative flow when I was drinking. I never seemed to execute these creative ideas, though. Sobriety is essentially lonely—one needs give and take of other creative people to bring out one's own creativity. It's difficult to find other creative people in a nonusing environment.

It is clear that Joe Raymond had his ups and downs. Originally, having ups and downs was included as a Beyonder characteristic, but not much support for this has yet been manifested. However, 4 of the men in the Beyonder group had military service and none of the Sociometric Stars group had military service. None of the women in either group had any military service.

Looking at the reported experiences of the 10 regular members of the Sociometric Stars group, a number of hypotheses can be advanced for their not achieving Beyonder status.

- Jeane North was a divorcee, had a child to care for, and tended to be quite conforming.
- Alice Driscoll also had a conforming orientation that was reinforced by her choice of a lawyer as a spouse. She got her degrees at the "right" universities. She also had three children to care for, and she did not consider herself as creative.
- Roberta Kohl received 95 creative nominations, but gave top priority to her family and to volunteer community work. She reported that she enjoyed doing a newsletter for her high school class and that the hardest job she had

tackled was serving as a coach for the Future Problem Solving Program.

- David Barclay was troubled by a divorce. He started off brilliantly, but seemed to lose his fire and enthusiasm during the period of this follow-up. He did not see himself as creative.
- David's sister, Mary Barclay, was interested in a medical career when she was in high school, but she did not want to compete with her doctor father, which persisted even after her father's death. She was married to a man who already brought a large number of children to the marriage, so most of her early career was spent in caring for them. At the time of the follow-up, she was remarried and had been working creatively in the health field, but she regretted not having a medical degree.
- Natalie Moore was just getting started on her creative career as a psychotherapist. She too had a troubling divorce, a remarriage, and the care of two children. She had had doubts regarding her creativity and had only recently accepted herself as a creative person.
- Dorothy Young had difficulty in finding a focus for her career in law. She seemed to have found such a focus, was being reinforced by her lawyer husband, and was attracting considerable attention for her creative solutions. She had had doubts regarding her role in law.
- Kate Post was another member of the Sociometric Stars group whose creative achievements seemed to have been diminished by divorce and remarriage and failure to find a focus.
- Irving Brock was perhaps too focused on his acting career. He had been an actor since elementary school with no break. There was no evaluation of the quality of his acting, and his personal achievements were quite small. As a mature actor, he was quite active in the leadership of organizations for actors.
- Charles Stowe might well have been a Beyonders if credit can be given to emergency medicine and his paintings. He was satisfied with his role.

Summary

The purpose of this paper was to examine the creative achievements and characteristics of a group of able high school students for whom their classmates held great expectations. Sociometric Stars were determined by a sociometric test with creative criteria taken in 1960 while the participants were still in high school. The Sociometric Stars group consisted of the 10 subjects who had the highest number of sociometric nominations.

The Beyonders group consisted of the 10 subjects who had the greatest number of publicly recognized creative achieve-

ments between 1971 and 1991 based on the questionnaires of all of the participants. There was only one subject who qualified for both groups, and he was excluded from both groups and replaced in the analyses by the next highest ranked person.

Mini-case studies were presented for the 10 Sociometric Stars and hypotheses based on these data were advanced to explain their failure to qualify as Beyonders. The most frequent hypotheses involved divorce, children to care for, failure to focus, too narrow a focus, and conflicts regarding their creativity. When compared with the Beyonders, the Sociometric Stars less frequently gave evidence of loving their work, having persistence, being guided by a clear purpose in life, having a diversity of experiences, having a high energy level, and being open to change.

These results may help explain why the usual predictors (creativity, intelligence, academic achievement, sociometric nominations, etc.) lost some of their power to predict creative achievement. Over the long haul, the factors revealed in this study became more important.

References

- Amabile, T. (1986). The personality of creativity. *Creative Living*, 15(3), 12-16.
- Cohen, J. (1988). *Statistical power analysis of behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Henderson, M., & Presbury, J. (1983). *Manifesto for children* (Poster). Athens, GA: Torrance Center for Creative Studies.
- Shekerjian, D. (1990). *Uncommon genius: How great ideas are born*. New York: Penguin Books.
- Torrance, E. P. (1969). Prediction of adult creative achievement among high school seniors. *Gifted Child Quarterly*, 13, 71-81.
- Torrance, E. P. (1971). Identity: The gifted child's major problem. *Gifted Child Quarterly*, 15, 147-155.
- Torrance, E. P. (1972). Career patterns and peak creative achievement of creative high school students twelve years later. *Gifted Child Quarterly*, 16, 75-88.
- Torrance, E. P. (1983). The importance of falling in love with "something." *Creative Child and Adult Quarterly*, 8, 72-78.
- Torrance, E. P. (1984). *Mentor relationships: How they aid creative achievement, endure, change, and die*. Buffalo, NY: Bearly Limited.
- Torrance, E. P. (1991). The Beyonders and their characteristics. *Creative Child and Adult Quarterly*, 16, 69-79.
- Torrance, E. P. (1993). The Beyonders in a thirty year longitudinal study. *Roeper Review*, 15, 131-135.